Editorial

Towards European Standards in Neuroradiology

P. LASJAUNIAS

Service de Neuroradiologie Diagnostique et Therapeutique, Hôpital de Bicêtre, Université Paris Sud; Le Kremlin Bicêtre; France

The meaning of standards

Standard is also a French word, taken from the English in 1893. In English, "standard" has meant: a distinctive flag or banner since the 12th century; it took the meaning of an original specimen measure or weight from the 15th to 16th century. The word originates from the old French "estendart" which in 1080 meant rallying place through the intermediate AngloNorman "estaundart" and "standardus" to the 13th century meaning of standard of weights.

In French, the word is used, and cited, like the English word to signify the fineness of gold or silver and the legally fixed weight of each coin when first minted. Since the 20th century, it has been the type or model to be followed for manufacture. As an adjective it is used in the "standard exchange" which appeared in 1930. This meant to replaced a manufactured product by another standard of the same type (unit for unit). The noun quickly went on to embrace the characteristics defining different systems (television, video, etc...), "standard of living" and the "standard cost of living". In French, the word only had a pejorative sense in the thirties meaning "conforming to the established model" "lacking originality": the standard basic model.

Standard has yielded the verb "standardiser" in French, again from the English "to standardise" (1873). The verb means to bring production into conformity with manufacturing regulations to devise a small number of standard types, to make uniform. By analogy, it has taken on the meaning of conforming to a standard model, and to normalize (conform to a norm).

It is interesting to see the three meanings of the word standard from its origin to its sense of "gold standard", as a unit of measure and as a general model for a uniform standard. It is likely that the search for a standard for education and training embraces all three meanings to be at once a banner, a unit of measure and a model.

One of the basic issues is: "can a standard be international without being dogmatic or the expression of a single way of thinking?" There is certainly a great deal of difference between establishing an international neuroradiological "ideology" and negotiating existing practices and sometimes divergent interests.

As is often the case, the truth lies somewhere in between these two positions. The search for international standards with international experts should be able to integrate their dreams and their experience to yield an idealised (ideological) vision of accumulated experience. Coleridge said "the light which experience gives is a lantern on the stern, which shines only on the waves behind us". We have to accept his sententious tone and latch on to the hope of being able to develop a different view of the future, possibly removed from the past.

The example of the European projects is but one of many. It is a slow and tedious construction in a system whose national and European rules are established even before we start. These rules were made by men and we must accept that if they turn out to be insufficiently

flexible or already out-of-date, they must evolve under the pressure and quality of what they embrace.

Therapeutic aim - doctors' aim

The medical challenges we are faced with today are distorted by economic, political, industrial and trade union considerations. In the field of therapeutics, one could simply announce that the aim of a treatment is to correct or improve the natural history or outcome of a disease, even to prevent an illness. The steps necessary to this type of aim are many and if they go through an improvement of therapeutic means made available to physicians, they presuppose a capacity to choose these means and select those patients who will benefit from the treatment.

They therefore require appropriate initial and ongoing training of physicians. Today, the distortion I refer to was the fact that basic therapeutic decisions at stake are glided over, towards the way public health is financed, industrial strategy and the "egocratic" nature of medical and scientific debates. Scientific competitions, the dogma of impact factor, the rarity of jobs on offer and fixing administrative regulations of different practices, lower the levels of individual competition and divert (or pervert) the therapeutic aim. Nowadays, for convenience, specialists think it is enough to be better that their average colleagues; the ultimate ambition is to be better than the best of them. Some round tables and the choice of participants, privilege this confrontation of egos to the detriment of academic debates and the benefit of patients.

From intentions to results

Less than ever is medicine a science; we are not in a logical system, but a modelised one in which everything is more or less true or more or less false. The medical challenges raised, the answers given are often fragments of virtual science. These fragments of scientific answers are diverted to become the topics of an unstable or dogmatic dialectic by turns political, economic or corporate but seldom centred on the patients' interests.

Basically, the freedom to practise medicine today must, in form and essence, remain dependent on the result obtained, in taking charge of a patient; its aim is to improve the course of the disease. The quality of the therapeutic goal and the means mobilised may not suffice. Physicians, be they specialists or not, must therefore choose as reference the known or supposed history of the disease; they must choose as tools, those whose supposed or real results are the best for that history. A treatment will be deemed useless if the result obtained by its administration does not improve the course of the illness. These results could be insufficient if they do not achieve the best possible level vis à vis the disease. If the technique adopted is used by many, being better that the best physician may not be enough. Trying a new therapeutic technique or method rests on the principle (nowadays one would say ethics) of improving existing results (or at least obtaining the same result), improving the administration or the cost. Implementing a technique for which one is not virtually certain that it will yield at least the same result, leads to a "waste of a chance".

Technical standards or clinical standards?

Establishing points of reference (standards) of disease histories generally constitutes a much better horizon of the whole therapeutic aim than a consensual (sometimes only consenting) discussion. Ensuing standards of practice and results presupposes knowledge of disease natural history and technical possibilities and risks. Even though it is rare for the same persons to both master a technique and be knowledgeable on the epidemiological outcome of this or that illness, an ongoing exchange between the two spheres of competence must lead to the right questions being posed in the right order:

1) what is the history of the illness at issue?
2) how can disease carriers be identified or separated?
3) which techniques respond to the basic question of the therapeutic aim of "being better than the disease"?

Nowadays, it would not seem acceptable (ethical) to conceive of a medical speciality solely from the technological standpoint so true is it that being shut within a monolithic training of this type, distances doctors from their patients. Training in computers or aeronautics is a good example of the sort of drift

and answers which can be made. Medicine, in particular, imaging techniques, are much more exposed in this wholly technological field. Haematology, immunology and genetics have moved in the opposite direction : laboratory specialities have become clinical specialities which does not stop them developing their diagnostic methods.

Neuroradiology, made fragile by its multiple developments, can hardly escape this analysis. Freedom to practise, the aim for diagnostic and therapeutic quality and ethical quality depend on mastering training and establishing standards of practice. Any innovative speciality and practice which does not build a specific foundation becomes easy prey for managers in health and industry.

In the case of neuroradiology, the already existing sub-specialities testify its development, yet its roots lie in the neurological disciplines. Neuroimaging, functional imaging, therapeutic neuroradiology, paediatric neuroradiology, head and neck neuroradiology, neuro-ophthalmology illustrate the benefit ensuing from the polyvalent training of those who founded neuroradiology in general, and European neuroradiology in particular, in the sixties. It is also this diversity which makes it fragile. It is this heritage which it ought to preserve and modernise at the dawn of European regulations and harmonisation of quality levels. It is with this ambition that Europe will in turn be able to play its role as an international reference.

Neuroradiologist standards

Like a pendulum, the history of the neurosciences in Europe has shown how neurology, neuropsychiatry, neurosurgery and neuroradiology have in turns been at the forefront in introducing more knowledge, more hope and more precision in taking care of head and neck and central nervous system diseases. Today, neurology and neurosurgery, with different methods, a different past and a different culture, are developing a European Board in their specialty: the former uses a federation of national experiences, in the best interests of the patient, the latter after nearly 25 years has implemented a course gathering young European specialists in training in a cycle of annual seminars over five years.

Taking into account what we had done in 1983 to set up the European Neuroradiology Course, the creation of a European Standard for the neurological and neurosurgical speciality requires from us an identical neuroradiological plan

– Can neuroradiology leave it up to others to establish standards of practice and training?

– Can neuroradiology allow doubt to be shed on its expertise and its ability to determine the foundations and the type of training it deems optimal?

– Can neuroradiology accept being reduced to and ranked as an imaging technique targeted to the brain?

– Can neuroradiology agree to disappear as such, to survive chopped into pieces within other specialities? These frontline specialities would have absorbed the fragment of the neuroradiological culture they were interested in and established standards in a "sub-field" of its ancillary practice?

The answer is not a simple one, but avoiding the question is irresponsible for patients, future generations and for intellectual freedom. Henceforth, making available innumerable thesauruses by means of books or the internet has taken the place of tutoring, sorting and criticism. The inevitable flexibility (intellectual and in qualification) compels us to search for a effective polyvalence, but detached from the technique. Such polyvalence needs to be grounded in fields deemed perennial focal points for patients. It is in this spirit that the search for a neurosciences curriculum should be developed. Today it is difficult to imagine that the bridges of neuro-imaging (between neurology and neuroradiology), neuronavigation or interventional neuroradiology (between neurosurgery and neuroradiology) will not be able to give way to a flexible and adapted profile of individuals.

Towards a European solution

Implementing these training schemes in a European setting must allow European professional certifications to be established rapidly together with regulations for assignment and obtaining points for continuous professional update. On the basis of a more uniform offer of training level, discussions on the harmonisation of practices and insurance cover can be undertaken. Another sequence in establishing these

taken. Another sequence in establishing these results would risk giving way to corporate negotiations confronting the university, administrative and private interests of insurance companies for example.

Setting up a European Board entails definition of a regularly updated professional profile, giving way to the creation of a curriculum constituting the basis of training: the way knowledge is transmitted, the development of skills and approach coinciding with the strategy of the European Society of Neuroradiology to create a European neuroradiological specialty, or at least to pinpoint the basic values. We must accept that they could lead to training schemes very different from those available or in preparation in other regions of the world.

The transfer of theoretical knowledge in the form of

– accredited courses (ESNR education certification) being able to give training points;

– converting the European Neuroradiology Course (ECNR) into a theoretical course of the European board of neuroradiology, as for neurosurgeons;

– or lastly International University Diplomas with Portugal giving rise to the attribution of a Portuguese neuroradiology speciality,

are other possible routes to theoretical training. Practical training presupposes programmes and mobility. They impose validation of rotations according to a format recommended by the European Community and already accepted for neurology and neurosurgery, in the form of visiting groups accrediting programmes or departments. A service being reviewed upon its request, takes a voluntary step which allows it to receive a corresponding "European board of ..." certification.

Training the right approach (the attitude) is up to the tutor within the training programme to include and enhance the medical aspects of training in neuroradiology by developing in the trainee specialist an ethical and deontological sense of practice. Identifying this training approach is also a way of ensuring a difference between different schools, countries, regions... It is also the possibility of combating single profiles and practices whose cultural normalisation is worthy of the most dangerous utopias.

The problem of validating the curriculum then becomes a secondary problem. The first choice is that of regular control which could best prepare young specialists for continuing education. This regular evaluation is ensured by each accredited training programme. This choice preserves existing national schemes. This is the scheme proposed and adopted by neurologists.

The second possibility may correspond to the implementation of a written and oral examination with log book; this is the choice made by neurosurgeons. At a certain time it gives specialists an identity, a sort of formal entry into the specialty. This special aspect of the examination, something of an initiation rite, cannot be disregarded.

Discussion on equivalencies with diplomas obtained in other parts of the world and the importance of certain "free" candidates who wish to verify their ability to fulfil the European standard (and return to their own countries to practise) is very important. In fact, this type of examination does not issue a license to practise, which for the time being is still awarded by national administrative bodies, but creates a tool to be used by the future accrediting body for European practice.

All these schemes finally have the dual advantage of harmonising without homogenising practices in Europe. They prepare the adaptation of professional bodies to a more internationalised practice. They allow European directives to be integrated rapidly. They state that the medical and intellectual interest of neuroradiology lies in the neurosciences and in mastering its training; they shift financial interest to other debates (public and private health administration or industry). General imaging can hardly lead the future of neuroradiology since it refuses to recognize and thus preserve its specificity.

Prof. Pierre L. Lasjaunias
Neuroradiologie diagnostique et interventionnelle
Hôpital de Bicêtre
Université Paris-sud
78, rue du Général Leclerc
94275 Le Kremlin-Bicêtre Cedex (France)
e-mail: pierre.lasjaunias@bct.ap-hop-paris. fr
web site: www.neuroradio.net